

On Problems of Rock Disintegration. Transactions of  
the Conference in the Mining Institute

SOV/30-58-8-33/43

up of quartzites from the anomalous magnetic ores from Kursk  
and from ores of other sites.

A.P.Ostrovskiy, A.I.Gol'binder and A.A.Pavlichenko on new  
methods of blasting in the drift advance of bore holes.

M.I.Koyfman on rules governing the rock disintegration by  
means of rotating and percussion drilling.

R.M.Eygeles on the dependence of bore thrust, on the drill  
pressure, on the drill speed, on rock properties etc.

Ye.I.Il'nitskaya on mechanical extraction of coal.

N.G.Karatavoy on the specific pressure distribution on the  
leading edge of the cutter in coal extraction.

At the end of the conference it was emphasized that the  
majority of research work which has hitherto been conducted  
was entirely of an experimental nature. Theoretical and  
experimental research is to be intensified in the future.

Card 2/2

BERON, Aba Isaakovich, kand. tekhn. nauk; KAZANSKIY, Anatoliy  
Sergeyevich, kand. tekhn.nauk; LEYBOV, Boris Mikhaylovich,  
starshiy nauchnyy sotr.; POZIN, Yevgeniy Zal'manovich,  
kand.tekhn.nauk; SHOROKHOVA, A.V., red. izd-va; PROZOROVSKAYA,  
V.L., tekhn. red.

[Cutting of coal] Rezanie uglia. Moskva, Gosgortekhnizdat,  
1962. 438 p. (MIRA 15:7)  
(Coal mining machinery)

LEYBOV, B.M., inzh.; BARON, L.I., prof., doktor tekhn. nauk, red.

[Methodology of determining the resistance of coals to cutting from the results of mechanical tests of specimens of random shape] Metodika opredeleniia soprotivliaemosti uglei rezaniu po rezul'tatam mekhanicheskikh ispytanií obraztsov proizvol'noi formy. Moskva, Institut gornogo dela im. A.A.Skochinskogo, 1962. 27 p. (MIRA 16:4)  
(Coal--Testing)

LEYBOV, B.M.

Determination of coal resistance to cutting based on the  
coefficients of strength and structure. Fiz.-mekh.svois.,dav.1  
razr.gor.porod no.1:268-277 62. (MIRA 16:3)  
(Coal--Testing)

razr.gor.porod  
no.1:268-277  
62.

razr.gor.porod  
no.1:268-277  
62.

LEYBOV, B.M.

Crushing indices and methods of calculating the expected size of coal  
broken up by cutting. Fiz. mekh. svois., dav. i razr. gor. porod. no.  
2:30-42 '63. (MIRA 17:1)

LEYBOV, B.M., inzh.

Degree of mechanical heterogeneity of coals. Nauch. soob. IGD  
21:182-185 '63. (MIRA 17:2)

L 8172-66 EWT(1)/EWA(h)  
ACC NR: AP5024993

SOURCE CODE: UR/0286/65/000/016/0056/0056

AUTHORS: Leybov, E. A.; Kurochkin, Yu. M.; Avilov, V. Ye.; Zhironkin, V. P.;  
Pleshkova, L. Ye.

ORG: none

TITLE: Vacuum-sealed high-voltage electromagnetic relay. <sup>25</sup> Class 21, No. 173845  
/announced by Organization of the Leningrad SNKh (Organizatsiya Leningradskogo  
SNKh) 7

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 56

TOPIC TAGS: electromagnetic equipment, relay system, contact stress

ABSTRACT: This Author Certificate presents a vacuum-sealed high-voltage electro-  
magnetic relay. The relay coil together with the contact system is placed inside an  
evacuated tube (see Fig. 1). The relay is set on a bantam mount. The design is  
intended to increase the wear resistance of the contacts and to reduce the size of  
the relay. The relay armature is attached to an omega-shaped laminated spring  
fastened to the frame of the electromagnet. This arrangement, together with the  
contact springs, is located in the upper part of the relay frame.

Card 1/2

UDC: 621.318.56.027.3

L 8172-66  
ACC NR: AP5024993

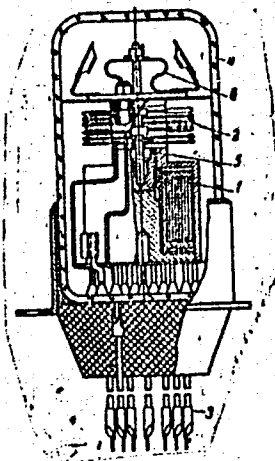


Fig. 1. 1- electromagnet coil; 2- contact system; 3- bantam mount; 4- tube; 5- armature; 6- omega-shaped laminated spring

Orig. art. has: 1 figure.

SUB CODE: EE/ SUBM DATE: 06Feb64

Card 2/2

ACC NR: AP6029897

SOURCE CODE: UR/0413/66/000/015/0059/0060

INVENTOR: Laybov, E. L.; Kurochkin, Yu. M.; Avilov, V. Ye.; Zhironkin, V. P.; Sokolov, I. L.; Mamontova, L. T.

ORG: none

TITLE: Vacuum electromagnetic relay. <sup>1/5</sup> Class 21, No. 184351

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 59-60

TOPIC TAGS: electric relay, vacuum relay. *technique!*

ABSTRACT: A vacuum electromagnetic relay is introduced whose coil, wound with a heat-resistant wire, such as glass wire, is placed together with a contact system in



Fig. 1. Vacuum relay

- 1 - Coil; 2 - contact system;
- 3 - small leg; 4 - glass tube;
- 5 - armature; 6 - return spring;
- 7 - plate.

Card

APPROVED FOR RELEASE: Monday, July 31, 2000. 64-186.2 CIA-RDP86-00513R000929

ACC NR: AP6029897

a glass tube (see Fig. 1). To reduce both the weight and size of the relay, the device has a rotary armature, positioned parallel to the coil axis, and a return spring, placed together with contact springs on a plate perpendicular to the armature. Orig. art. has: 1 figure. [JR]

SUB CODE: 09/ SUBM DATE: 06Feb64/ ATD PRESS: 5069

Card 2/2

VINOGRADOV, Nikolay Yakovlevich; KARASIK, N.S., otvetstvennyy redaktor;  
LEYBOV, M.K., redaktor; BEREZSLAVSKAYA, L.Sh., tekhnicheskiiy redaktor

[Automatization of district telephone communications and the control  
of radio rediffusion centers] Avtomatizatsiia telefonnoi svyazi i  
upravleniia radiouzlami v raione. Moskva, Gos. izd-vo lit-ry po  
voprosam svyazi i radio, 1956. 33 p. (MIRA 10:1)  
(Automatic control) (Telephone, Automatic) (Radio)

LEYBOV, M.K.

AUTHORS: Fedorovich, Ye.G., Frolov, P. A. Call Nr: TK 5101.F 35

TITLE: Ways for Further Technical Progress of Means of Communication (Puti dal'neyshego tekhnicheskogo progressa sredstv svyazi) Courses in Communication Technology (Lektsii po tekhnike svyazi)

PUB.DATA: Gosudarstvennoye izdatel'stvo literatury po voprosam svyazi i radio, Moscow, 1956, 34 pages, 12,000 copies

ORIG.AGENCY: Technical Administration of the Ministry of Communications of the USSR

EDITORS: Chief Ed: Fortushenko, A.D.; Ed: Leybov, M. K.; Tech.Ed: Sushkevich, V.I.;

PURPOSE: The preface, signed by the Technical Administration of the Ministry of Communications, USSR, states that the monograph "is in essence a summary written to assist people giving reports who are managers of administrations and communication concerns." It is presented as part

Card 1/4

Call Nr: TK 5101.F 35  
Ways for Further Technical Progress of Means of Communication (Cont.)  
of a lecture series on communication technology.

COVERAGE: This booklet is a brief description of the principal objectives and trends in the technical development of communication facilities in the Sixth Five-Year Plan. Mention is made of the organization in 1956 of the Central Scientific Research Institute for Telephone Technique in Leningrad (NIITS) and of the Kiyev branch of the Central Scientific Research Institute for Communications (TsNIIS). There are no bibliographic references.

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Card 2/4

Ways for Further Technical Progress of Means of Communication (Cont.)

Call Nr: TK 5101.F 35

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Card 3/4

Ways for Further Technical Progress of Means of Communication (Cont.)

Call Nr: TK 5101.F 35

VI. Tasks in the field of technical information and propaganda

AVAILABLE: Library of Congress

32

Card 4/4

SEMENOV, Vasilii Ivanovich; KUTSENKO, Petr Prokof'yevich; PADUCHIN,  
Leonid Pudovich; AKIMOVA, N.M., otvetstvennyy redaktor;  
LEYBOV, M.K., redaktor; SUSHKEVICH, V.I., tekhnicheskiiy redaktor

[Automatization of telephone communication in a district]  
Avtomatizatsiia telefonnoi svyazi v raione. Moskva, Gos.  
izd-vo lit-ry po voprosam svyazi i radio, 1956. 37 p.

(Telephone, Automatic)

(MLRA 10:5)

DANILOV, Viktor Aleksandrovich; D'YACHENKO, Vladimir Fedorovich; NEMIROV-  
SKIY, S.A., otvetstvennyy redaktor; LEVROY, M.K., redaktor;  
BERESLAVSKAYA, L.Sh., tekhnicheskij redaktor

[The work of a brigade with installation of telephone cables lead-in]  
Rabota brigady po ustroystvu vvodov telefonnogo kabelia. Moskva,  
Gos. izd-vo lit-ry po voprosam svyazi i radio, 1957. 17 p.  
(Telephone cables) (MIRA 10:2)

AFANAS'YEV, Aleksandr Porfir'yevich; DUBROVSKIY, Ye.P., otv. red.;  
LEYBOV, M.K., red.; BERESLAVSKAYA, L.Sh., tekhn. red.

[Systematized servicing of subscriber's apparatus on municipal  
telephone networks] Razdel'noe obsluzhivanie abonentskikh ustroystv  
na gorodskikh telefonnykh setiakh. Moskva, Gos. izd-vo lit-ry po  
voprosam svyazi i radio, 1958. 28 p. (MIRA 14:9)  
(Telephone—Equipment and supplies)

MALYSHEVA, Natal'ya Vladimirovna; NAUMOV, Boris Konstantinovich; OSTINSKIY, Aleksey Yakovlevich; YARTSEV, G.Ye., otv.red.; LEYBOV, M.K., red.; KARABILOVA, S.F., tekh.red.

[Direct system of automatization and operation of long-distance telephone communications] Nemedlennaya sistema ekspluatatsii i avtomatizatsiya mezhdugorodnoi telefonnoi svyazi. Moskva, Gos. izd-vo lit-ry po voprosam svyazi i radio, 1958. 53 p.

(MIRA 12:3)

1. Zamestitel' nachal'nika Tsentral'noy mezhdugorodnoy telefonnoy stantsii (for Malysheva). 2. Glavnyy inzhener Rzhenskoy mezhdugorodnoy telefonnoy stantsii (for Naumov). 3. Glavnyy inzhener Leningradskoy mezhdugorodnoy telefonnoy stantsii (for Ostinskiy).  
(Telephone)

PETROV, Ya. V.; GALEEV, I. G.; GOLUBENTSEV, A. N.; Min. Engs.; LEYBOV, R. M., Docent.

Electricity in Mining

Comments on M. I. Ozernoi's book "Electric Engineering in Mines." Ugol' 28, No. 4, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

LEIBOV, R.M.

Protection from leakage in mine electric networks. Ugol' 29 no.5:5-6  
My '54. (MLRA 7:6)

1. Donetskii industrial'nyy institut.  
(Electricity in mining)

LEYBOV, R.M., professor, doktor tekhnicheskikh nauk; KHORUNZHIY, V.A.,  
inzhener, redaktor; PROZOROVSKAYA, V.L., tekhnicheskii redaktor

[Electrical equipment for underground coal mining; collection  
of articles] Elektrooborudovanie podzemnykh vyrabotok ugol'-  
nykh shakht; sbornik statei. Moskva, Ugletekhnizdat, 1955. 518 p.  
(MIRA 9:2)

(Coal mining machinery) (Electricity in mining)

8(2)

SOV/112-59-4-6946

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 4, p 75 (USSR)

AUTHOR: Leybov, R. M.

TITLE: Improving the Leakage Protection in Mine Electric Networks

PERIODICAL: V sb.: Gorn. elektrotehnika, M., Ugletekhizdat, 1957, pp 97-109

ABSTRACT: Existing leakage-protective systems are analyzed, and a RUV-type protection is recommended for mine electric networks; operating experience with RUV protection over a number of years revealed its efficiency. Today's projects on improving this type of protection are listed in detail. Having considered the functioning of the entire RUV protection and its individual parts, the author draws the lines for further improvement of the scheme and its operating methods. A table of RUV-tripping resistances, a signaling scheme, a 3-phase rectifier scheme supplied by choke coils, and a group-selective protection scheme are presented.

I. V. Kh.

Card 1/1

LEYBOV, R.M., professor, doktor tekhnicheskikh nauk; KRESTEV, K.I.,  
inzhener.

Experience in operating the RUV-type ("section switching relay")  
leakage protection. Bezop.truda v prom. 1 no.8:5-8 Ag '57.  
(MLRA 10:8)

1. Donetskii industrial'nyi institut im. N.S. Khrushcheva.  
(Electric relays)  
(Electric currents, Leakage)

LEYBOV, R.M., prof.; MOSKALETS, K.I., kand. tekhn. nauk

Preventing current leakage. Bezop.truda v prom. 2 no.4:5-8 Ap '58.  
(MIRA 11:4)

1. Donetskii industrial'nyy institut.  
(Electricity in mining)

LEYBOV, R.M., prof.

HUV protection in circuits with low-resistance insulation. Izv.vys.  
ucheb.zav.; gor.zhur. no.5:79-90 ' 58. (MIRA 12:1)

1. Donetskii industrial'nyy institut.  
(Electricity in mining) (Electric currents (Leakage))

LEYBOV, R.M., prof.

Parallel operation of R.U.V.-type leakage relays. Izv.vys.ucheb.zav.;  
shur. no.7:76-92 '58. (MIRA 12:3)

1. Donetskii industrial'nyy institut.  
(Electric currents, Leakage)

LEYBOV, R.M., prof.; SHUMEYKO, V.I., starshiy nauchnyy sotrudnik; SUMIN, I.F.  
starshiy nauchnyy sotrudnik

Flexible, shielded cables in mines. Ugol' 33 no.4:29-31 Ap '58.  
(MIRA 11:4)  
1. Donetskiiy industrial'nyy institut (for Leybov). 2. Makeyevskiy  
nauchno-issledovatel'skiy institut po bezopasnosti gornyykh rabot (for  
Shumeyko, Sumin).  
(Electricity in mining)

LEYBOV, R.M., prof., red.; FAYRISOVICH, I.L., otv.red.; MIRSKAYA, V.V.,  
red.isd-va; LOMILINA, L.N., tekhn.red.

[Underground electric equipment in foreign countries] Pod-  
zemnoe elektrooborudovanie za rubezhom; sbornik statei. Moskva,  
Ugletekhnizdat, 1959. 307 p. (MIRA 13:6)  
(Electricity in mining--Equipment and supplies)

~~LEYBOV, R. M.~~ prof.; KRESTEV, K.I., inzh.

Discriminatory group protection against current leakage in the  
electric system of a mine section. Ugol' Ukr. 3 no.6:14-16  
Je '59. (MIRA 12:11)

1. Donetskii industrial'nyy institut.  
(Electricity in mining)

KARPOV, Yevgeniy Fedorovich; KRAVCHENKO, Vladimir Sergeyevich, doktor tekhn. nauk; LEYBOV, Ruvim Moiseyevich, doktor tekhn.nauk; SHEYNBERG, Samuil Davydovich; MIRSKAYA, V.V., red.izd-vs; KOROVENKOVA, Z.A., tekhn.red.; BERESLAVSKAYA, L.Sh., tekhn.red.

[Automatic protective devices in mines] Avtomaticheskie shakhtnye zashchitnye ustroistva. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1960. 111 p.

(MIRA 13:7)

(Electricity in mining--Safety measures)

LEYBOV, R.M., prof., doktor tekhn.nauk; DREMOV, V.I., inzh.

New protection against the danger of touching the contact wires.  
of the electric haulage system. Bezop.truda v prom. 4 no.10:  
21-22 0 '60. (MIRA 13:11)

1. Donetskij politekhnicheskij institut (for Leybov).
  2. Dongl-prouglemash (for Dremov).
- (Mine haulage--Safety measures)

LEYBOV, R.M.

Ways of improving the protection of flexible cables. Trudy MakNII 11.  
Vop.gor.elektromekh.no.3:104-112 '60.

(MIRA 16:5)

(Electric cables)

LEYBOV, R.M., prof., doktor tekhn. nauk, red.; OGLOBLIN, D.N.,  
prof., doktor tekhn. nauk, red.; NAYDYSH, A.M., prof.,  
red.; KSENOFONTOVA, A.I., prof., red.; MELVEDEV, B.I.,  
dots., red.; TARANOV, P.Ya., dots., red.; LEYUOV, R.M.,  
prof., red.; SHTOKMAN, I.G., prof., red.; POLESIN, Ya.L.,  
otv. red.; YEROKHIN, G.M., tekhn. red.

[Safety measures in the coal industry] Tekhnika bezopas-  
nosti v ugol'noi promyshlennosti. Moskva, Gosgortekhzdat,  
1963. 317 p. (MIRA 16:12)

1. Donetskii politekhnicheskii institut (for Taranov,  
Shtokman).

(Coal mines and mining--Safety measures)

LEYBOV, R.M., doktor tekhn.nauk; ZHELIKHOVSKIY, Kh.M., inzh.

Accuracy (sensitivity) of protection against leakage. Izv.vys.  
ucheb.zav.; gor.zhur. 7 no.2:124-131 '64. (MIRA 17:3)

1. Donetskii politekhnicheskii institut. Rekomendovana kafedroy  
gornoy elektrotekhniki i avtomatiki.

L 16458-66

ACC NR: AP6009075

SOURCE CODE: UR/0105/65/000/004/0094/0094

AUTHOR: Alatortsev, S. A.; Blazhkin, A. T.; Gladilin, L. V.; Ivanov, A. A.;  
Leybov, R. M.; Ozernyy, M. I.; Pirotskiy, P. P.; Rengavich, A. A.; Rozenman, Ye. A.;  
Rys'yev, A. V.; Tulin, V. S.; Trop, A. Ye.

ORG: none

TITLE: Professor S. A. Volotkovskiy

SOURCE: Elektrichestvo, no. 4, 1965, 94

TOPIC TAGS: electric engineering personnel, mining engineering

ABSTRACT: In this salute to Prof. Volotkovskiy on his 60th birthday, the dozen signers of the article state that he, as head of the department of electrification of mining operations and industrial enterprises of the Dnepropetrovsk mining institute, has been a leader in the electrification and modernization of mining processes. In the field since 1920, Sergey Andronikovich completed his studies in the Dnepropetrovsk mining institute. He worked in the institute from 1930-1941. He became a doctor of technical sciences and professor in 1950, while at the Sverdlovsk mining institute. He returned to the Dnepropetrovsk mining institute in 1959. A member of the party since 1927, he has published over 130 works. Orig. art. has: 1 figure.  
[JPRS]

SUB CODE: 08, 09 / SUBM DATE: none  
Card 1/1me

UDC: 622:621.311.002,5

33

B

2

**"APPROVED FOR RELEASE: Monday, July 31, 2000**

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**CIA-RDP86-00513R000929720C**

**"APPROVED FOR RELEASE: Monday, July 31, 2000**

**CIA-RDP86-00513R000929720**

**APPROVED FOR RELEASE: Monday, July 31, 2000**

**CIA-RDP86-00513R000929720C**

Leybov, Yu. L.

AID P - 5156

Subject : USSR/Engineering

Card 1/1 Pub. 103 - 15/18

Author : Leybov, Yu. L.

Title : Using high frequency heating for brazing bronze lining in bushings.

Periodical : Stan. i instr., 5, 43, My 1956

Abstract : The installation for overlaying bronze lining into steel bushing larger than 30 mm in diameter with the help of the MGZ-52 50 kw 2500 hertz generator is described by the author. The same generator has also been used for tempering parts and for bonding hard alloys and mineral-ceramic points of cutting tools at the Kusa (Chelyabinsk oblast') Construction Machinery Plant. One complete drawing.

Institution : As above

Submitted : No date

L 29685-66 EWT(1)/EWT(m)/I/EWP(w)/EWP(t)/ETI IJP(c) JH/JD/JG  
ACC NR: AT6011850 (N) SOURCE CODE: UR/2536/65/000/063/0086/0093

AUTHORS: Bibikov, Ye. L. (Candidate of technical sciences); Leybov, Yu. M. (Engineer)

ORG: Moscow Aviation Technology Institute (Moskovskiy aviatsionnyy tekhnologicheskii institut)

TITLE: Influence of beryllium and magnesium additives on the properties of Al + 7% Si alloy

SOURCE: Moscow. Aviatsionnyy tekhnologicheskii institut. Trudy, no. 63, 1965.  
Proizvodstvo otlivok iz legkikh splavov (Production of Castings from light alloys), 86-93

TOPIC TAGS: metal property, solid mechanical property, aluminum alloy, silicon alloy, magnesium, beryllium iron/ AL9 aluminum alloy

ABSTRACT: The effect of the addition of Mg, Be, and Fe to Al<sup>2</sup> + 7% Si alloy on the mechanical properties of the alloy was determined. The Mg content varied from 0 to 0.6%, the Be content from 0 to 1.0%, and Fe was added in two different quantities only, viz.: 0.2 and 0.5%. The usual mechanical properties, e.g., strength limit, percent elongation, hardness, etc, were determined as a function of alloy composition and annealing temperature. The experimental results are shown graphically (see Fig.1). It was found that the addition of Mg and Be, up to 0.6 and 1% respectively, to Al-Si alloys improves their mechanical and structural properties.

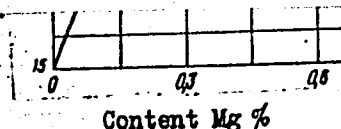
Card 1/2

UDC: 669-18:669.715:001.5

Orig. art. has: 7 figures.

SUB CODE: 1120/SUBM DATE: none/ ORIG REF: 002

Card 2/2



1ST AND 2ND POSITIVE

PROCESSES AND PROPERTIES INDEX

7

CA

Determination of carbon dioxide in air. Z. M. Leibov.  
*Lab. Probl.* (U. S. S. R.) 1937, No. 9, 26-8. Air enters  
the app. by displacing a satd. soln. of NaCl in very dil.  
H<sub>2</sub>SO<sub>4</sub>, which absorbs practically no CO<sub>2</sub> and is then passed  
through a measured vol. of Ba(OH)<sub>2</sub> soln. A back titration  
dets. the amt. of CO<sub>2</sub> present. The method is reliable

for as little as 0.38-0.99% of CO<sub>2</sub>. The small vol. of the  
app. makes transportation easy. W. R. Henn

ASB-LLA METALLURGICAL LITERATURE

1ST AND 2ND POSITIVE

1ST AND 2ND POSITIVE

**CIA-RDP86-00513R0009297200**

LEIBOV, Z. M.  
CP

Methods for the detection of free mineral acids in vinegar. Z. M. Leibov. *Lab. Prakt.* (U. S. S. R.) 1937, No. 11-12, 32-35; *Chem. Zentr.* 1938, II, 1140.—Methods of detn. are given. M. G. Moore

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

**Determination of glass particles in foods.** Z. M. Leboy, *Lab. Probl.* (U. S. S. R.) 1939, No. 6, 25-7.—The detn. of such particles is usually necessary in liquids (water, sirups) or in solids (sugar, salt, starch, etc.). Their sepn. is obtained by filtration after the solution of the sample under investigation. Black filters are recommended. For their prepn. take stout Ba filters, moisten them with a satd. soln. of the Cl or the SO<sub>4</sub> salt of aniline, dry, moisten with a 5% soln. of BaCl<sub>2</sub>, dry and repeat the treatment (CaH<sub>2</sub>NH<sub>2</sub>, BaCl<sub>2</sub>). Wash the filters first with tap water, then with distd. water, and dry. The filters are colored a deep black (aniline black). The soln. under investigation is filtered in a Büchner funnel. Wash the residue once with distd. water, twice with alk. (8-10 ml. each time) and once with ether. Remove the residue to a watch glass, and examine it in a drop of water under a microscope. Dye the particles with methylene blue, basic fuchsin, auramine, vesuvine, thionine or pyronine. The solns. of these dyes (2% aq., for vesuvine in 50° alc.) impart a very distinct color to the quartz sand particles after 2-3 min. The glass particles (also mica and hornblende) are not colored. For a pos. identification of glass the particles must be identified by other means. W. R. Henn

**Iron in food.** Octavio de Paula Santos, Tito A. de A. Cavalcanti and P. A. de Moura Campos. *O Hospital* 13, 1007-1008 (1938).—In 44 vegetable foodstuffs and derivs. Fe found was between 03.0 and 2.6 mg. per kg. food. Fe content decreases in the order soybean, mustard, mulatto bean, bitter sow thistle, bitter succory, spinach,

wild endive, caruru (a Brazilian spinach), endive, cabbage, water cress, headed cabbage, lettuce, broccoli (03.0-18.0 mg. Fe per kg.), English potato, dwarf banana, sweet potato, carrot, small manioc, tomato, white bread, white grape, small radish, apple, banana, cucumber, manioc, quiabo (a Brazilian kidney bean), ginkgo, xuxu (Brazilian plantain) and black grape (12.0-2.6 mg. Fe per kg.). The sow thistle and succory are rich also in Ca. Boiling of the vegetables (mulatto bean and manioc) causes a considerable loss in Fe.  
George Nachod

1ST AND 2ND COLUMNS																										3RD AND 4TH COLUMNS																									
PROCESSES AND PROPERTIES INDEX																																																			
<div style="display: flex; justify-content: space-between;"> <span>CA</span> <span>1. R</span> </div> <div style="text-align: center;"> <p><b>Preparation of Tyrode solution. Z. M. Lefkov. Lab. Prakt. (U. S. S. R.) 14, No. 9-10, 20-1(1939).</b> A modified method of Dauvergne is proposed for the prepn. of Tyrode solns. Prepare separately 2 solns. Dissolve 3.78 g. of pure, anhyd. <math>\text{Na}_2\text{CO}_3</math> in 2700 ml. of water (soln. I), and <math>\text{NaCl}</math> 24 g., glucose 3 g., <math>\text{CaCl}_2</math> (anhydrous) 0.6 g., <math>\text{MgCl}_2</math> (cryst.) 0.2 g., <math>\text{Ca}(\text{H}_2\text{PO}_4)_2</math> 0.15 g. and <math>\text{HCl}</math> (d. 1.19 dild. with the same vol. of distd. water) as much as is necessary for exact neutralization of 3.78 g. of soda to phenolphthalein, in 300 ml. of distd. water (soln. II). Sterilize separately I and II and mix them together. <math>\text{Ca}(\text{H}_2\text{PO}_4)_2</math> was prepd. in the lab. by reaction of <math>\text{Ca}(\text{OH})_2</math> with <math>\text{H}_3\text{PO}_4</math>. No side reactions were observed in working with Tyrode soln. prepd. as described. Two references are given. W. R. Henna</p> </div>																																																			
<div style="display: flex; justify-content: space-between;"> <div> <p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>FROM STUDENT</p> </div> <div> <p>REVISION</p> <p>REVISION</p> </div> </div>																																																			

**CIA-RDP86-00513R0009297200**

(1) AND (2) SUPER		PROCESSES AND PROPERTIES INDEX	
<p><b>Determination of small amounts of naphthalene in air.</b></p> <p>Z. M. Lashov. Lab. Publ. (U. S. S. R.) 15, No. 11, 22-3 (1940).—L. tested and modified the method of A. V. Stepanov. Alc. solns. of trinitronaphthalene produce with alc. alkali colors of various intensity, depending on the concn. of the substance, alkali, time and the presence of impurities. In 5-6 ml. of alc. with 0.1 ml. of 1% alc. KOH it is possible to detect 0.003-0.6 mg. of binitronaphthalene. At concns. of up to 0.01 mg. best results are obtained by comparing the color of the meniscus; at higher concns., by viewing laterally. At the beginning the color is brownish pink or pink; beginning with 0.03 mg. it is orange-red. On standing the color changes: after 3 min. the standard is more pink than the brown soln. under investigation; after 4 and 5 min. the standard is identical with the soln. under investigation; and after 6 min. the standard is browner than the soln. under investigation. Peroxides, <math>\text{NH}_4\text{NO}_3</math>, water, ether and acids destroy or weaken considerably the color. Methyl orange is unsuitable because its color depends too much on the pH of water used for the prepn. of the standards. A mixt. of methyl orange and basic fuchsin (1 ml. of the soln. contains 0.008 mg. of methyl orange and 0.0024 mg. of the basic fuchsin soln.) gave good results. One part of naphthalene corresponds to 2.034 parts of the trinitro compd. The following procedure was used to verify the method of Stepanov. Evap. a known vol. of an ether soln. of naphthalene on a water bath at 40-50°, add 5 ml. of the Stepanov nitrating mixt. (dissolve 2 g. of <math>\text{NH}_4\text{NO}_3</math> finely ground and dried over <math>\text{H}_2\text{SO}_4</math> in 10 ml. of <math>\text{H}_2\text{SO}_4</math> (d. 1.84)), mix and pour into 3 vols. of water. Shake the acid liquid 3 times for 1-1.5 min. each time with 10 ml. of distd. ether treated preliminarily with <math>\text{FeSO}_4</math> soln., combine the ether exts., wash 2-3 times with 10 ml. of water in a sepp. funnel, pour through cotton into a 50-100 ml. flask with a ground stopper contg. 5-6 g. of anhydrous <math>\text{CaCl}_2</math> and dry with shaking for 20-30 min. Decant the ether through cotton into a dish or flask, dist. on a water bath at 40-50°, dissolve the residue in hot alc., add 0.1 ml. of 1% alc. KOH soln. and compare the colors. No naphthalene is lost during the condenses on water bath, but water from the surroundings condenses on perthe dish and affects the results when the evapn. is performed in open air. Nitration of naphthalene is instantaneous. As little as 0.003 mg. of naphthalene can be detected and detd.</p> <p style="text-align: right;">W. R. Henn</p>		<p style="text-align: right;">7</p>	
A.S.B.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION		E.S.O.M. BOARD	
E.S.O.M. STEELING		E.S.O.M. ONE GIVE LIST	
TENSORS #2		CELLULOSE	
E.S.O.M. STEELING		E.S.O.M. ONE GIVE LIST	
TENSORS #2		CELLULOSE	

Ca

Gravimetric determination of small amounts of lead.  
Z. M. Lefkov. Lab. Prakt. (U. S. S. R.) 15, No. 15, 20-2  
(1940).—Details are given for pptg. PbCrO<sub>4</sub> from boiling,  
faintly acidic solns. by adding K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> and weighing the  
ppt. after washing with HCl and ether W. R. H.

LEYBOV, Z.M.

Determination of glass particles with polarised light. Gig. sanit.,  
Moskva no. 1:41 Jan 1953. (GIML 24:2)

1. Of Stalino Oblast Sanitary Epidemiological Station.

LEYBOV, Ya.L.

Filming of dynamic mock-up backgrounds. Tekh.kino i telev. 4  
no.6:74-75 Je '60. (MIRA 13:7)

1. Kinostudiya "Lenfil'm".  
(Motion pictures--Setting and scenery)

LEYBOVA, I. M., BALGODETELEVA, V. A., PISKAREVA, YE. V., AVTONOMOVA, L. V.,  
KONONENKO, A. P., DERKACH, V. S., SAVCHENKO, A. M., SOGOMONOV, S. A.,  
MUKHINA, N. A., GORGUNKEL', D. K.

"The study of antitumor substances formed by microorganisms."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists  
and Infectionists, 1959.

PALANT, B.L.; MITEL'MAN, P.M.; VEREZUB, L.G.; GORFUNKEL'-KOSHKINA, D.M.;  
LEYBOVA, I.M.

Soluble antigen of pertussis bacillus for active immunization.  
Zhur.mikrobiol.epid.i immun. 31 no.8:57-60 Mg '60. (MIRA 14:6)

1. Iz Khar'kovskogo instituta vaktsin i vyvorotok imeni Mechnikova.  
(WHOOPING COUGH)

Distr. 1320

(The following information is for the use of the recipient only.)

*Handwritten:* 1320

Fe in the bimetallic... controlling the conditions correctly... of casting time, no. of revolutions... bronze layers can be obtained with no more than 1.0-1.5% Fe. Casting parts such as bushings is done best in a stepwise heat-centrifugal casting, if one wishes to get a low Fe assay. A construction of an inductor is described, which will lead to such a bronze layer with less than 1% Fe, where the distance between piston and blank is 3-4 mm., by aid of which 100 g. bronze is heated 45-60 sec., and cast. On occasion as much as 1.6% Fe in the bronze will not reduce the antifriction properties in bearings, if the Al in the bronze is less than 0.05%.

Werner Jacobson

1/1

*Handwritten:* 1320

PRATUSEVICH, R.M.; LEYBOVA, N.M.; ZCT'YEVA, A.S.

Increasing the durability of the gear wheels of machine tools. Stan.  
i instr. 36 no.5:12-15 My '65. (MIRA 18:5)

LEYBOVICH, A.G., kapitan 3-go ranga

Programmed instruction in the practical training of navy  
specialists. Mor. sbor. 47 no.4:39-42 Ap '64.

(MIRA 18:7)

KAL'NIK, V.N., inzh.-kapitan-leytenant; LEYBOVICH, A.G., kapitan 3-go  
ranga; SARANTSEV, G.S., kapitan 2-go ranga

New methods of training specialists. Mor. sbor. 46  
no.10:14-20 0 '63. (MIRA 18:12)

LEYBOVICH, A. I.

USSR/ Engineering - Building materials

Card 1/1 Pub. 104 - 6/14

Authors : Krushel', L. E. and Leybovich, A. I.

Title : Using local raw material for the production of glazed ceramics for building

Periodical : Stek. i ker. 11/11, 14-17, Nov 1954

Abstract : A survey is made of earths found in specified parts of the Soviet union that can be used as material for facing ceramic blocks used in the construction of buildings. The percentages of the ingredients of the respective earths are given along with special directions for processing each kind and descriptions of the finished products obtained. Thre USSR references (1952and1953)Illustrations; tables.

Institution: .....

Submitted: .....

~~LEYBOVICH, Boris Pavlovich~~; TANANIN, Vladimir Vasil'yevich;  
ZHIDELEV, M.A., nauchnyy red.; BONDAROVSKAYA, G.V., red.;  
ABOLEMOV, V.P., red.; BARANOVA, N.N., tekhn. red.

[Methods for training milling machine operators under  
industrial conditions] Metodika proizvodstvennogo obuche-  
niia frezerovshchikov po metallu. Moskva, Proftekhizdat,  
1963. 227 p. (MIRA 16:8)

(Milling machines)  
(Metal cutting--Study and teaching)

LEYBOVICH, D.M.

Interlocking operation of the hydraulic closing devices for the bottom  
diffuser door. Sakh. prom. 32 no.5:45-46 My '58. (MIRA 11:6)

1. Belovodskiy sakharnyy zavod.  
(Diffusers)

ZELIKMAN, I.F.; LEYBOVICH, D.M.

Affination of unrefined cane sugar at low temperatures. *Izv.vys.-*  
*ucheb.zav.; pishch. tekhn. no.3:50-53 '63.* (MIRA 16:8)

1. Krasnodarskiy institut pishchevoy promyshlennosti, kafedra  
tekhnologii sakharistyk veshchestv.  
(Sugar manufacture)

LEYBOVICH, D. M.; ZELIKMAN, I. F.; TROYANOVA, N. L.

Rapid method of determining the coefficient of saturation of solutions in sugar manufacture. Izv. vys. ucheb. zav.; pishch. tekhn. no.5:137-143 '62. (MIRA 15:10)

1. Krasnodarskiy institut pishchevoy promyshlennosti, kafedra tekhnologii sakharistyk veshchestv.

(Crystallization--Testing)  
(Sugar manufacture)

LEYBOVICH, D.M.; ZELIKMAN, I.F.

Transfer of saccarose through the ion exchange membranes during the  
electrodialysis purification of its solutions. Sakh.prom.37 no.9:30-  
36 S '63. (MIRA 16:9)

1. Krasnodarskiy politekhnicheskiy institut.  
(Sucrose) (Electrodialysis)

LEYBOVICH, D.M.

Concentration of the affination solution. Sakh.prom. 38 no.2:69  
F '64. (MIRA 17:3)

1. Krasnodarskiy politekhnicheskii institut.

LEIBOVICH, D.S., inzhener.

Explosion in the cell for an oil circuit breaker. Prom. energ. 11  
no.2:11-13 P '56. (MLRA 9:6)  
(Electric circuit breakers)

KNORRING, G.M., kandidat tekhnicheskikh nauk; BELYAKOV, A.A.; KRESLIN'SH,  
E.K., knzhenér; SHERMAZANYAN, Ya.T.; LEYBOVICH, D.S.

Use of PPv wires. Prom.energ. 11 no.12:22-25 D '56. (MIRA 10:1)

1. Gosudarstvennyy proyektnyy institut Tyazhpromelektroproyekt (for Knorring). 2. Gor'kovskoye otdeleniye Gosudarstvennogo proyektного instituta Elektroproyekt (for Belyakov). 3. Energosbyt Latvenergo (for Kreslin'sh). 4. Respublikanskiy proyektnyy institut, Yerevan (for Shermazanyan). 5. Trest "Moselektromontazh-2" (for Leybovich).  
(Electric wire, Insulated)

LEYBOVICH, D.S.

AUTHOR: Leybovich, D.S. (Engineer) 94-2-11/27  
 TITLE: The use of Bus Bars in housing and communal buildings. (Shinoprovody v zhilykh i obshchestvennykh zdaniyakh.)  
 PERIODICAL: Promyshlennaya Energetika, 1958, Vol.13. No.2. pp.25-26 (USSR)  
 ABSTRACT: To economise materials and simplify erection, the Technical Control and State Inspectorate of the Ministry of Electric Power Stations recommended, in December 1956, the use of steel or aluminium busbars for rising mains in housing and communal buildings. The decision was based on experience in housing in Moscow, the installations for which were suggested by Engineer I.I. Chechel'nitskiy. The advantages of such installations are reliability, high load-carrying capacity, and rationalisation of wiring work. They save non-ferrous metals and cut construction costs. Several designs of vertical busbars have been developed and are illustrated in Figs.1 & 2. In one case, steel-strip busbars are installed in a pipe; in another they are enclosed in brickwork. The current-density in steel busbars should not exceed 0.3 - 0.5 amps/mm<sup>2</sup>; soft steel is best. The steel busbars should not be more than 3 mm thick, with at least 20 mm clearance between phases. The busbars are joined by welding. There are 2 figures.

ASSOCIATION: Moselektromontazh - 2)

Card 1/2

The use of Bus Bars in housing and communal buildings.

94-2-11/27

AVAILABLE: Library of Congress.

1. Bus bars-Materials
2. Bus bars-Applications

Card 2/2

LEYBOVICH, D.S., inzh.; KOBISHCHANOV, V.N., inzh., red.

[Reinforced-concrete electrical wall panel for apartment houses] Elektrotekhnicheskaya zhelezobetonnaya stenovaya panel' zhilogo doma; opyt tresta "Moselektromontazh-2" i SKB "Prokatdetal'" Glavmosstroia. Moskva, Gosstroizdat, 1960. 14 p. (MIRA 14:12)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organizatsii i tekhnicheskoy pomoshchi stroitel'stvu. Byuro tekhnicheskoy informatsii. 2. Glavnyy tekhnolog tresta "Moselektromontazh-2" (for Leybovich).

(Concrete walls) (Electric wiring, Interior)

KOSOV, L.P.; LEYBOVICH, D.S.

Industrialization of electric installation work in housing and  
public building construction. Prom.energ. 15 no.6:1-6 Je  
'60.

(MIRA 13:7)

(Building)

(Electric wiring)

BIRGER, A., inzh.; KLOPOVSKIY, A., inzh.; LEYBOVICH, D.S. inzh.

Using industrial methods in electric-wiring operations. Zhil.  
stroi. no.7:16-19 JI '60. (MIRA 13:7)  
(Electric wiring, Interior)

KUZNETSOV, I.I.; LEYBOVICH, E.Ye., redaktor; VINOGRADOVA, N.M., redaktor; VOLKOVA, Ie., tekhnicheskiiy redaktor.

[Diver's manual; safety measures and techniques for diving and underwater work] Rukovodstvo dlia vodolaza; organizatsiia i tekhnika bezopasnosti vodolaznykh spuskov i podvodnykh rabot. Moskva, Gos. izd-vo vodnogo transporta, 1954. 182 p. (MLBA 7:11)  
(Diving, Submarine)

LEYBOVICH, F.; MAYCHAK, A.

Changes in the bioelectrical activity of the cerebral cortex in schizophrenia under the influence of single administrations of small doses of stelazine. Zhur. nevr. i psikh. 62 no.4:585 '62.

(MIRA 15:5)

1. Akademicheskaya gruppa chlena-korrespondenta AMN SSSR prof. A.V. Snezhnevskogo, klinicheskoye otdeleniya elektroentsefalograficheskoy laboratorii (zav. - prof. M.N.Livanov) Instituta vysshey nervnoy deyatel'nosti AN SSSR, Moskva.

(STELAZINE) (SCHIZOPHRENIA) (ELECTROENCEPHALOGRAPHY)

LEYBOVICH, F.A.

Changes in the bioelectric mosaic of the cerebral cortex in depressive patients treated with parazid. Zhur.nerv.i psikh. 59 no.12:1470-1479 '59. (MIRA 13:4)

1. Akademicheskaya gruppa chlena-korrespondenta AMN SSSR prof. A.V. Sneshnevskogo, klinicheskoye otdeleniye elektroentsefalograficheskoy laboratorii (zav. - prof. M.N. Livanov) Instituta vysshey nervnoy deyatel'nosti AN SSSR, Moskva.

(PSYCHOSES MANIC, DEPRESSIVE ther.)

(IPRONIAZID ther.)

(CEREBRAL CORTEX pharmacol.)

LEYBOVICH, F.A.

Studies on electrical activity changes in the cerebral cortex  
in patients with depressive states during treatment with imizin  
(tofranil). Zhur.nevr.i psikh. 61 no.2:186-200 '61.

(MIRA 14:6)

1. Akademicheskaya gruppa chlena-korrespondenta AMN SSSR prof.  
A.V.Snezhnevskogo, klinicheskoye otdeleniye elektroentsefalografiche-  
skoy laboratorii (sav. - prof. M.N.Livanov) Instituta vysshey  
nervnoy deyatel'nosti AN SSSR, Moskva.

(DEPRESSION, MENTAL)

(PIPERAZINE)

(ELECTROENCEPHALOGRAPHY)

LEYBOVICH, F.A.

Study of changes in the bio-electric mosaic of the cerebral cortex  
in schizophrenics during treatment with acepromazine (plogicil).  
Zhur. nevr. i psikh. 61 no.6:896-901 '61. (MIRA 15:2)

1. Akademicheskaya gruppa chlena-korrespondenta AMN SSSR prof.  
A.V.Snezhnevskogo, klinicheskoye otdeleniye elektroentsefalograficheskoy  
laboratorii (zav. - prof. M.N.Livanov) Instituta vysshey nervnoy  
deyatel'nosti AN SSSR, Moskva.

(SCHIZOPHRENIA) (ACEPROMAZINE) (ELETROPHYSIOLOGY)  
(CEREBRAL CORTEX)

LEYBOVICH, F.A.

Studies of the bioelectrical activity of the cerebral cortex in  
epilepsy. Vest. AMN SSSR 17 no.1:65-77 '62. (MIRA 15:3)

1. Iz akademicheskoy gruppy chlena-korrespondenta AMN SSSR  
professora A.V. Snezhnevskogo.

(EPILEPSY)

(CEREBRAL CORTEX)

SHTERNBERG, E.Ya.; LEYBOVICH, F.A. ; KORCHINSKAYA, Ye.I.

Clinical and electroencephalographic studies of patients  
with Huntington's chorea and their relatives. Zhur.nevr. i  
psikh. 62 no.12:1843-1854 '62 (MIRA 16:11)

1. Kafedra psikhatrii Tsentral'nogo instituta usovershen-  
stvovaniya vrachey i Institut psikhatrii (dir. - prof. A.V.  
Snezhnevskiy) AMN SSSR, Moskva.

\*

LEYBOVICH, F.A.; SHUMSKIY, N.G.

Clinical and electroencephalographic studies on aged patients with cyclic depression. Zhur. nevr. i psikh. vol. 64 no.5:746-754 '64.  
(MIRA 17:7)

1. Institut psikhatrii AMN SSSR i kafedra psikhatrii Tsentral'nogo instituta usovershenstvovaniya vrachev, Moskva.

LEYBOVICH, F.A.; SHCHIRINA, M.G.

Bioelectrical activity of the cerebral cortex and the characteristics of psychopathological disorders in some forms of cerebrovascular lesions. Zhur. nevr. i psikh. 65 no.6:874-882 '65. (MIRA 18:6)

1. Institut psikhatrii AMN SSSR i kafedra psikhatrii Tsentral'nogo instituta usover:henstvovaniya vrachey, Moskva.

LEYBOVICH, G. I.

USSR.

Hydrophobic Cement and Hydrophobic-Plasticizing Additions  
in Concretes and Mortars (Gidrofobnyy tsement i gidrofobno-  
plastifitsiruyushchie dobavki v betonakh i rastvorakh). M. I.  
Klimovichen and G. I. Lemovich. Promstrolizdat, Moscow,  
1953. 117 pp. - Results of investigations of hydrophobized  
cements, mortars, and concretes are presented. B.Z.K.

BRUSILOVSKIY, I.A., dotsent; BATSMAN, N.D.; LEYBOVICH, G.S.

Detection and treatment of precancerous conditions of the cervix  
uteri under conditions of a mud therapy spa. Sov. med. 25 no.8:  
129-131 Ag '61. (MIRA 15:1)

1. Iz kafedry akusherstva i ginekologii Krymskogo meditsinskogo  
instituta (zav. - prof. A.I.Petchenko) i sanatoriya imeni II  
s"yezda Kommunisticheskoy partii Sovetskogo Soyuza (glavnyy vrach  
N.D.Batsman), Yevpatoriya.  
(UTERUS\_\_DISEASES) (BATHS, MOOR AND MUD)

KOYEN, Ya.I.; LEYBOVICH, I.A.

Late results of treatment of the breast; from data of the Nikolaev  
Province Oncological Dispensary. Vop. onk. 6 no.5:98-102 My '60  
(MIRA 14:3)

(BREAST--CANCER)

GERSHTEYN, A.R., inzh.; ANIKEYEVA, A.F., inzh.; LEYBOVICH, I.R.; SAL'KOV,  
B.L., inzh.

Concerning S.T.Ivanov's article "Mistakes in designing the electrical  
section of electric power plants and substations." Elek. sta. 36  
no.2:83-85 F '65. (MIRA 18:4)

LEYBOVICH, KH. M.

LEYBOVICH, KH. M. - inzh. i, GORCHAKOV, G. I. - kand. tekhn, nauk., KHIGEROVICH, M. I. -  
kand. tekhn. nauk

Vsesoyuznyy nauchno-issledovatel'skiy institut tsementnoy proyshlennosti (NIITSement)

PRIMENENIYE GIDROFOBNOGO TSEMENTA V STROITEL'STVE

Page 105

SC: Collection of Annotations of Scientific Research Work on Construction, com-  
pleted in 1950, Moscow, 1951

LEIBOVICH, Kh, M.

"The Effect of Hydrophobization on the Properties of Cements and Concretes."  
Cand Tech Sci, All-Union Sci Res Inst of Glass, Min Construction Materials  
Industry USSR, Moscow, 1955. (KL, No 13, Mar 55)

So: Sum. No 670, 29 Sept 55 - Survey of Scientific and Technical Dissertations  
Defended at USSR Higher Educational Institutions (15)

97-57-9-10/17

AUTHORS: ~~Leybovich, Kh. M.~~ (Candidate of Technical Sciences and  
Kapkin, M. M. (Engineer).

TITLE: Effect of Organosilicon Additives on the Durability of  
Concrete (Vliyaniye kremniyorganicheskikh dobavok na  
stoykost' betona).

PERIODICAL: Beton i Zhelezobeton, 1957, Nr.9. pp.369-371 (USSR).

ABSTRACT: The durability of concrete depends on the action of  
aggressive materials and the effect of frost. The  
effect of aggressive materials in adverse conditions  
does not depend only upon the chemical and mineralogi-  
cal composition of Portland cement, but also on the  
physical properties of concrete, which tend to increase  
corrosion. During recent years surface-active additives  
have been widely used for concrete, with the effect of  
changing the structure of the concrete and increasing  
its density. NIITsement carried out investigations aimed  
at increasing the durability of concrete made from  
cements containing C<sub>3</sub>A in excess of 5% (that is, cement  
which does not comply with the temporary technical re-  
quirements of MPSM, USSR (1949), allowing for the fact  
that the concrete would be subjected to frost and other  
aggressive media. Experiments were carried out on the

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97-57-9-10/17

Effect of Organosilicon Additives on the Durability of Concrete.

effect of organo-silicon additives in cement; a sodium salt of methyl silicon and ethylpolysiloxanes were used. Methyl silicon compound is a white powder soluble in caustic soda. This was introduced into a concrete mixture in a 16% solution. Ethylpolysiloxane (KZh) is an oily liquid which is insoluble in water. This was used in a 50% aqueous emulsion. The cements used in these investigations were prepared in the laboratory of the Nikolayev plant. The mineralogical composition of the clinker was:  $C_3S$  - 60%,  $C_2S$  - 17%,  $C_3A$  - 13%,  $C_4AF$  - 9%; the degree of grinding of cement was defined by the residue on sieve No.0085, and equalled 8%. The effect of organo-silicon compounds on the strength of cement was defined according to the method of GOST 310-41. Results are tabulated in Table 1. Data obtained show that organo-silicon compounds used in quantities of 0.05 and 0.1% increase slightly the hardness of the cement with regard to compression as well as to tension. The additive of 0.2% decreases the strength in compression and increases the strength in tension. The influence of organo-silicon additives was investigated in concrete which contained equal or

Card 2/4

97-57-9-10/17

Effect of **Organosilicon** Additives on the Durability of Concrete.

smaller quantities of water in comparison with controlled concretes (without additives). The tests on strengths and frost-resistance were carried out on test cubes 10 x 10 x 10 cm. The concrete mix used was 1 : 1.75 : 3.5, and the water/cement ratio was 0.45 and 0.35-0.38. A vibrator was used in the casting and consolidation of the cement. The aggregates consisted of granite ballast graded down from 20 mm, and "Moskvoretsk" sand. Table 1 gives the strength of the cement in grout of stiff consistency, of 1 : 3. Table 2 gives the properties of concrete mix with water/cement ratio of 0.45. Ethylpolysiloxane compounds very easily plasticize concrete mixes with water/cement ratio equalling 0.45, as shown in Table 2 and in Fig.1. The plasticizing action of organo-silicon materials in concrete mixes with water/cement ratio of 0.45 was evaluated by its workability - defined by the method of Prof. B. G. Skramtayeve. Fig.2 gives a graph of the strengths of the concrete test cubes made with water/cement ratio of 0.45, in relation to the form and quantity of organo-silicon additives. Table 3 gives properties of concrete mixes of a similar workability prepared with a small

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quantity of water and deposited by vibration without load. Fig.3. gives graphs of the strengths and frost resistance of concrete test cubes made with water/cement ratio of 0.35 - 0.38, in relation to the type of organosilicon additive. Fig.4 shows a graph of the frost resistance of concrete test cubes with water/cement ratio of 0.45, in relation to quantity of additives used. The cubes were defrosted in an aggressive medium (sea water) of the following composition (in gms per litre):  
 $\text{NaCl} - 27.213$ ;  $\text{MgCl}_2 - 3.807$ ;  $\text{MgSO}_4 - 1.658$ ;  $\text{CaSO}_4 - 1.260$   
 $\text{K}_2\text{SO}_4 - 0.863$ ;  $\text{CaCO}_3 - 0.123$ ;  $\text{MgBr}_2 - 0.076$ ;  $\text{KCl} - 0.510$   
 The total quantity of salts was 35.510 gm per 1 litre.  
 As a result of the above investigations it was possible to obtain frost resisting concrete, based on cement with high content of tricalcium aluminate, by adding 0.1 - 0.15% of ethylpolysiloxane compounds.

AVAILABLE: Library of Congress.

1. Concrete-Durability
2. Concrete-Weather effects
3. Concrete-Additives-Effectiveness

Card 4/4

ROYAK, S.M., dotsent, kand.tekhn.nauk; LEYBOVICH, Kh.M., kand.tekhn.nauk

Cement for speeded-up production of prestressed concrete construction elements. Trudy NIIT Cement no.13:51-67 '60. (MIRA 13:11)  
(Cement) (Precast concrete)

31973  
S/081/61/000/023/042/061  
B138/B101

15.3200

AUTHORS:

Sheykin, A. Ye., Royak, S. M., Leybovich, Kh. M.,  
Nikolayev, V. L.

TITLE:

Long-time strength gain of concrete

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 23, 1961, 355, abstract  
23K380 (Tr. Gos. Vses. n.-i. in-ta tsementn. prom-sti,  
1960, no. 14, 118-130)

TEXT: When  $C_3S$  and  $C_2S$  are hydrated, hydrosilicates of the same composition and structure are formed. In a cement brick they form an independent phase with a highly dispersed crystalline structure and a slight tendency to secondary crystallization. According to Bernal this is due to crystals which have a lamellar structure, so that the interplanar spacings vary in dependence on water content. There are three components to the structure of cement brick: (a) a crystalline concretion formed by isomorphously crystallizing compounds of  $Ca(OH)_2$  and  $3CaO \cdot Al_2O_3 \cdot 6H_2O$  and hydrosulfoaluminates of calcium; (b) a gelling structural component formed by the

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Long-time strength gain ...

calcium hydrosilicates; (c) partially hydrated grains of portland cement clinker. The physicommechanical properties vary in dependence on the quantitative ratio of the structural components and the degree of hydration of the cement grains. Strength variations with time are the result of two opposing processes: (a) thickening of the gel, which consolidates the structure and increases the strength of the cement brick; (b) ageing of the crystalline concretion, which is accompanied by a reduction in strength. In the initial stages of solidification, strength is determined mainly by the number of few formations able to produce crystalline concretions. This means that strength diminishes in the early stage of solidification as the belite concentration increases. Higher belite concentration causes the strength increase period to be extended. This is attributed both to the hydration of the cement and the thickening of the gel. Ageing of the crystalline concretion is the result of the disintegration of unstable mixed crystals to form a metastable multi-phase state, causing increased embrittlement and changing the physicommechanical properties of the brick. Depending on the combined effect of these processes, the period of strength gain may be extended, the variation in time may be negligible, or strength may go completely. A method is proposed for the determination of the possibility of a long-time strength gain.

Card 2/3

ROYAK, S.M., dotsent, kand.tekhn.nauk; LEYBOVICH, Kh.M., kand.tekhn.nauk;  
CHERKASOVA, A.F., kand.tekhn.nauk

Rapid method of determining the grade of cement by using contact  
heating. Nauch. soob. NIITSementa no.12:35-38 '61. (MIRA 15:7)  
(Cement--Testing)

LEYBOVICH, Kh.M., kand. tekhn. nauk; TARNARUTSKIY, G.M., inzh.

Water repellent cement with synthetic additives. TSement  
31 no. 6:11-12 N-D '65. (MIRA 18:12)

1. Vsesoyuznyy gosudarstvennyy nauchno-issledovatel'skiy  
institut tsementnoy promyshlennosti.



LEYBOVICH, M.B.

Late results of treatment with Matsesta high concentration baths;  
preliminary report. Vop.kur., fizoter.i lech.fiz.kul't. 27 no.3:  
239-243 My-Je '62. (MIRA 15:9)

1. Glavnyy vrach sanatoriya "Golubaya Gorka" v Khoste, Krasnodarskiy  
kray.

(MATSESTA---MINERAL WATERS, SULFUROUS)

LEYBOVICH, M.B. (Khosta)

Results of organizing climatotherapy in the "Golubaya Gorka"  
Sanatorium. Vop.kur., fizioter. i lech fiz. kul't. 28 no.2:  
115-118 Mr-Apr'63. (MIRA 16:9)  
(SOCHI-SANATORIUMS). (CLIMATOLOGY, MEDICAL)

CA

LEYBOVICH, M.G.

2

Electrokinetic studies on capillary systems of a definite, geometrically regular form. II. Electroosmotic transport and streaming potential. O. N. Orlovskiy and M. G. Leybovich (Univ. Leningrad). *Kolloid. Zhur.* 12, 175: 73(1950); cf. C.A. 44, 6635d. — Steady laminar flow must be present in electroosmotic measurements. Membranes were made of mixed glass capillaries having quadratic cross sections  $d$  of 45 or 120  $\mu$ ; the nos. of the capillaries varied from membrane to membrane, but the total cross section of the pores remained const. (approx. 0.015 sq. cm.). The streaming potential  $E$  of 0.001  $N$  KCl was independent of the compn. of the membrane and proportional to the pressure applied, and gave electrokinetic potential  $f = 11-12$  mv. The electroosmosis was smaller the higher the percentage of the wide capillaries; e.g.,  $f$  was 14 mv. for 971 narrow capillaries and 3 mv. for 265 narrow — 80 wider capillaries. This was so because laminar flow was not achieved in wide capillaries. In membranes made of equal capillaries, the electroosmotic  $f$  was greater the greater the ratio  $r = \text{length:edge}$  of the capillary. Apparently,  $r$  at which  $f$  reached the const. max. value was greater the greater  $d$ ; e.g.,  $f$  became const. at  $r = 60$  for  $d = 35 \mu$  and at  $r = 160$  for  $d = 160 \mu$ . In polystyrene capillaries,  $f$  became const. at  $r = 80$  or 270 for  $d = 90$  or 110  $\mu$ . Membranes with a small  $r$ , which show no electroosmosis at small potential gradients, showed one on increasing the voltage. Glass capillaries had higher  $f$  the smaller  $d$  (e.g. 27 mv. and 9 mv. for  $d = 3$  and 120  $\mu$ , resp.); this was caused presumably by the method of prepn. of the capillaries. J. J. Bikerman

LEYBOVICH, M.M.

ABDURASULOV, D.M., prof.; LEYBOVICH, M.M., assistant; ALESHIN, V.A., ordinator

Diagnosis of foreign bodies of the esophagus. Sbor.trud.Tashk.KBNP  
no.1:193-198 '56 (MIRA 11:3)  
(ESOPHAGUS--FOREIGN BODIES)